

## Chapman Law Review

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Volume 3 | Issue 1

Article 9

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2000

# The Endangered Species Act Application to Isolated Species: A Substantial Effect on Interstate Commerce?

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THE ENDANGERED SPECIES ACT’S APPLICATION TO ISOLATED SPECIES:  
A SUBSTANTIAL EFFECT ON INTERSTATE COMMERCE?

by Jeanine A. Scalero<sup>1</sup>

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## I. INTRODUCTION

The Endangered Species Act<sup>2</sup> (“ESA”) celebrated its 25th anniversary on December 28, 1998. The Act was passed overwhelmingly by a Congress that sought to protect such creatures as the bald eagle. However, the Act is under renewed attack as private landowners, incensed by government control of their property, seek to have portions of the Act declared unconstitutional.

The constitutional basis for many environmental statutes, including the ESA, is the Commerce Clause, which grants Congress the authority to regulate activities that affect interstate commerce.<sup>3</sup> This clause has historically been broadly construed until the recent Supreme Court decision of *United States v. Lopez*.<sup>4</sup> The *Lopez* decision narrowed the reach of the Commerce Clause by requiring Congress to show a substantial effect on interstate commerce in order for federal laws to withstand constitutional attack.<sup>5</sup>

The ESA’s application to isolated species is ripe for constitutional challenge. Isolated species are those which are indigenous to a specific geographic region, and are nonmigratory. Opponents may argue that these species cannot have a “substantial effect” on interstate commerce if they are not moving across state lines. A recent decision from the Fourth Circuit, *United States v. Wilson*,<sup>6</sup> rejected the application of the Clean Water Act<sup>7</sup> (“CWA”) to an isolated wetland for lack of a substantial effect on interstate commerce.<sup>8</sup> In contrast, a panel of the United States Court of Appeals for the D.C. Circuit recently upheld application of the ESA to an isolated species in *National Association of Home*

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<sup>2</sup> Endangered Species Act of 1973, Pub. L. No. 93-205, 87 Stat. 884 (1973) (codified as amended at 16 U.S.C. §§ 1531-1544 (1994)).

<sup>3</sup> U.S. CONST. art. I, § 8, cl. 3 (“To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes . . .”).

<sup>4</sup> *United States v. Lopez*, 514 U.S. 549 (1995).

<sup>5</sup> *Id.* at 559.

<sup>6</sup> *United States v. Wilson*, 133 F.3d 251 (4th Cir. 1997).

<sup>7</sup> Clean Water Act, 33 U.S.C. §§ 1251-1387 (1994).

<sup>8</sup> *Wilson*, 133 F.3d at 258.

*Builders v. Babbitt*.<sup>9</sup> Unfortunately, the value of this decision as precedent remains to be seen, since the two judges in the majority failed to agree upon a rationale under Commerce Clause authority, and the third judge dissented.

This Note discusses whether the ESA should apply to isolated endangered species, after *Lopez*'s limitation on congressional Commerce Clause power. Section II outlines the relevant provisions of the ESA. Section III then reviews the history of the Commerce Clause, including *Lopez*. Section IV summarizes Commerce Clause jurisprudence in environmental legislation before and after *Lopez*. Section V discusses federal jurisdiction over isolated species and the "take by habitat modification" provision. Finally, section VI provides an analysis of why Congress can and should regulate isolated species under the ESA.<sup>10</sup>

## II. THE ENDANGERED SPECIES ACT

The Endangered Species Act was enacted by Congress in 1973 as a vehicle for conserving endangered and threatened species and their ecosystems.<sup>11</sup> The goal of the Act was not only to prevent the extinction of animal and plant species caused by man's influence on their ecosystems, but also to restore the species as viable components of their ecosystems.<sup>12</sup> The ESA reflects congressional recognition of the multitude of benefits of species preservation. Congress stated that the ESA was necessary because "fish, wildlife, and plants are of esthetic, ecological, educational, historical,

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<sup>9</sup> National Ass'n of Home Builders v. Babbitt, 130 F.3d 1041 (D.C. Cir. 1997).

<sup>10</sup> But see David A. Linehan, *Endangered Regulation: Why the Commerce Clause May No Longer Be Suitable Habitat for Endangered Species and Wetlands Regulation*, 2 TEX. REV. L. & POL. 365, 366 (1998) (arguing that Congress does not have the power to regulate isolated species under the Endangered Species Act).

<sup>11</sup> 16 U.S.C. § 1531(b) (1994); see also *Pacific Rivers Council v. Thomas*, 936 F. Supp. 738 (D. Idaho 1996) (noting that the Endangered Species Act "is a comprehensive statutory scheme aimed at conserving endangered and threatened species and the ecosystems on which they depend"); *Palila v. Hawaii Dep't of Land and Natural Resources*, 649 F. Supp. 1070, 1076 (D. Haw. 1986) (arguing that one of the main purposes of the Endangered Species Act was to conserve and preserve ecosystems upon which endangered species depend).

<sup>12</sup> H.R. REP. NO. 95-1625, at 3 (1978), reprinted in 1978 U.S.C.C.A.N. 9453.

recreational, and scientific value to the Nation and its people.”<sup>13</sup> Congress had the authority to enact the ESA under the Commerce Clause, because of the link between these values and interstate commerce.<sup>14</sup>

The 1973 Act repealed the Endangered Species Conservation Act of 1969,<sup>15</sup> broadened federal responsibilities to list species, and increased federal authorization and programs to ensure their survival.<sup>16</sup> The impetus for the renewed Act was congressional concern about rapidly deteriorating fish, wildlife and plant habitats, the indiscriminate utilization of plants and animals, and the increasing numbers of species threatened with extinction.<sup>17</sup> Congress expressed concern not only about hunting and direct destruction or exploitation of endangered species, but also development, which destroys habitats and leads to the extinction of species.<sup>18</sup> Because of economic growth, various species had already become extinct and other species were rapidly decreasing in numbers and in danger of extinction.<sup>19</sup>

To implement the ESA section 4 directs the Secretary of Commerce or Interior to establish a list of species determined to be “endangered” or “threatened,” and to designate the critical habitat of the species, based upon the best scientific data available.<sup>20</sup> The U.S. Fish and Wildlife Service (“FWS”) now lists 1,217 endangered and threatened plants and animals in the United States alone.<sup>21</sup> The Secretary must also describe activities, in the Secretary’s opinion, which would adversely affect such habitat. Furthermore, section 7(a)(2) requires all federal agencies to work with the Secretary to ensure that their activities will not “jeopardize the continued existence of any endangered species or threatened

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<sup>13</sup> 16 U.S.C. § 1531(a)(3).

<sup>14</sup> John C. Nagle, *The Commerce Clause Meets The Delhi Sands Flower-Loving Fly*, 97 MICH. L. REV. 174, 184-86 (1998).

<sup>15</sup> Endangered Species Conservation Act of 1969, Pub. L. No. 91-135, 83 Stat. 275 (1969) (repealed 1973).

<sup>16</sup> See H.R. REP. NO. 95-1625, at 3.

<sup>17</sup> *Id.*

<sup>18</sup> Craig Anthony Arnold, *Conserving Habitats and Building Habitats: The Emerging Impact of the Endangered Species Act on Land Use Development*, 10 STAN. ENVTL. L.J. 1, 5-6 (1991).

<sup>19</sup> 16 U.S.C. §§ 1531(a)(1), (2) (1994); *Tennessee Valley Auth. v. Hill*, 437 U.S. 153, 173 (1979) (stating that the plain intent of Congress, in enacting the ESA, was to halt and reverse the trend towards species extinction, whatever the cost).

<sup>20</sup> 16 U.S.C. § 1533(a).

<sup>21</sup> Division of Endangered Species, U.S. Fish & Wildlife Serv., *Listings and Recovery Plans for Endangered and Threatened Species* (last modified Nov. 30, 1999) <<http://www.fws.gov/>

species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary,” to be critical.<sup>22</sup>

Even though the ESA is a federal regulatory scheme, certain provisions of the Act have significant state and local effects. The provision thought to be most susceptible to invalidation on Commerce Clause grounds is section 9(a)(1)(B). Section 9 specifically forbids any person from “taking” endangered species.<sup>23</sup> “Persons” include private individuals and entities, as well as federal, state, and local, governments and officials.<sup>24</sup> The ESA defines “take” to mean “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”<sup>25</sup> The FWS by regulation further defines “harm” to mean an act “which actually kills or injures wildlife.”<sup>26</sup> Such acts include “significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.”<sup>27</sup> This regulation is commonly referred to as the “take by habitat modification” provision. It is this provision which is heavily criticized as an encroachment on private land development rights.<sup>28</sup>

To lessen the impact, section 10(a) offers private landowners the opportunity to carry out a project by obtaining an incidental take permit. If a developer wants to build in an area inhabited by an endangered species, and the action may result in the incidental taking of that species, the developer must submit a comprehensive habitat conservation plan (“HCP”) to the FWS to obtain an incidental take permit.<sup>29</sup> The FWS scrutinizes the plan and hears public comment. The FWS will issue a permit if: (1) the taking will be incidental to an otherwise lawful activity; (2) the applicant will minimize and mitigate

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r9endspp/boxscore.html>. For a complete listing of all the endangered and threatened wildlife, please see 50 C.F.R. § 17.11(h) (1999).

<sup>22</sup> 16 U.S.C. § 1536(a)(2).

<sup>23</sup> 16 U.S.C. § 1538(a)(1)(B).

<sup>24</sup> 16 U.S.C. § 1532(13).

<sup>25</sup> 16 U.S.C. § 1532(19).

<sup>26</sup> 50 C.F.R. § 17.3 (1999).

<sup>27</sup> *Id.*

<sup>28</sup> Barton H. Thompson, *The Endangered Species Act: A Case Study in Takings & Incentives*, 49 STAN. L. REV. 305, 306-15, (1997); see also Arnold, *supra* note 18, at 2, 7-13; *Landowners Equal Treatment Act: Hearings on H.R. 1142 Before the House Comm. on Resources*, 106th Cong. 60 (1999) (testimony of Nancie G. Marzulla, Defenders of Property Rights); Frances C. James, *Lessons Learned From a Study of Habitat Conservation Planning*, 49 BIOSCIENCE 871 (1999).

the impacts of the taking; (3) there will be adequate funding for the conservation plan, and; (4) the taking will not appreciably reduce the likelihood of species survival.<sup>30</sup>

Even though, land use has historically been a matter of local control,<sup>31</sup> sections 9 and 10 grant the federal government extensive authority over private land use. Since almost 80% of all protected species have some or all of their habitat on privately owned land,<sup>32</sup> the federal government's influence over local land use is immense. This growing influence under the authority of statutes like the ESA has been referred to by scholars as the "quiet federalization" of land use.<sup>33</sup> Further, the government influence is reinforced by the Act's strict penalties. For example, the penalties for violating section 9(a)(1)(B), as set out in section 11, include criminal penalties of a fine up to \$50,000, and imprisonment for one year.<sup>34</sup>

### III. THE COMMERCE CLAUSE POWER

#### A. History of Commerce Clause Jurisprudence

Article I, section 8, of the United States Constitution creates a federal government of enumerated powers.<sup>35</sup> James Madison stated that "[t]he powers delegated by the proposed Constitution to the federal government are few and defined. Those which are to remain in the State governments are numerous and indefinite."<sup>36</sup> This scheme was adopted to ensure the protection of our fundamental liberties and reduce the risk of tyranny.<sup>37</sup> The tripartite structure of the federal government prevents the accumulation of excessive power in any one branch, and similarly, a healthy balance of

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<sup>29</sup> 16 U.S.C. § 1539(a).

<sup>30</sup> *Friends of Endangered Species, Inc. v. Jantzen*, 760 F.2d 976, 982 (9th Cir. 1985).

<sup>31</sup> Arnold, *supra* note 18, at 2.

<sup>32</sup> James, *supra* note 28, at 871.

<sup>33</sup> Arnold, *supra* note 18, at 3 (citing F. BOSSELMAN ET AL., *FEDERAL LAND USE REGULATION* (1977)).

<sup>34</sup> 16 U.S.C. § 1540(b).

<sup>35</sup> U.S. CONST., art. I, § 8.

<sup>36</sup> *THE FEDERALIST* NO. 45, at 292-93 (James Madison) (Clinton Rossiter ed., 1961).

<sup>37</sup> *United States v. Lopez*, 514 U.S. 549, 552 (1995)

power between state and the federal government reduces the risk of tyranny from both. It is this tension between federal and state power that ensures the promise of liberty.<sup>38</sup>

Under this structure, Congress has been delegated the enumerated power “to regulate Commerce with foreign Nations, and among the several States.”<sup>39</sup> Throughout the history of Commerce Clause jurisprudence, courts struggled to define “commerce.” Nevertheless, this power became “one of the most prolific sources of national power.”<sup>40</sup>

To understand Commerce Clause power today, one must look at the early decisions interpreting the Clause, beginning in 1824 with *Gibbons v. Odgen*, which gave rise to the “effects doctrine.”<sup>41</sup> In *Gibbons*, the Court held that Congress had not only the power to regulate interstate commerce but also the power to regulate intrastate activities that affected interstate commerce.<sup>42</sup> Justice Marshall held that only activities “which are completely within a particular State, which do not affect other States,” fall outside the Commerce Clause power.<sup>43</sup> This principle was followed in *Houston East & West Texas Railway v. United States*, where the Court allowed Congress to set intrastate railway rates, because the rates had a negative impact on interstate commerce.<sup>44</sup> The Court held that the intrastate rates had “a close and substantial relation” to interstate traffic.<sup>45</sup>

The protection of public morals also became possible via the Commerce Clause. For instance, *Champion v. Ames* gave rise to the “bar doctrine” when it upheld the Federal Lottery Act of 1895 which proscribed the transportation of lottery tickets interstate.<sup>46</sup> Justice Harlan, writing for the majority, held that Congress’s power included the power to prohibit items from moving within the flow of commerce.<sup>47</sup>

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<sup>38</sup> Gregory v. Ashcroft, 501 U.S. 452, 458-59 (1991); *Lopez*, 514 U.S. at 576.

<sup>39</sup> U.S. CONST., art. I, § 8, cl. 3.

<sup>40</sup> H.P. Hood & Sons, Inc. v. DuMond, 336 U.S. 525, 534 (1949).

<sup>41</sup> *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1 (1824).

<sup>42</sup> *Id.* at 186-98.

<sup>43</sup> *Id.* at 195.

<sup>44</sup> *Houston E. & W. Tex. Ry. v. United States*, 234 U.S. 342, 355 (1914).

<sup>45</sup> *Id.*

<sup>46</sup> *Champion v. Ames*, 188 U.S. 321 (1903).

<sup>47</sup> *Id.* at 362-63.



A more restrictive view of the Commerce Clause was seen in *A.L.A. Schechter Poultry Corp. v. United States*, which held that once an article was no longer in the stream of commerce, Congress may not regulate it.<sup>48</sup> The Court distinguished between “direct” and “indirect” effects. Activities that affected interstate commerce directly were within Congress’s power; and activities that affected interstate commerce indirectly were beyond Congress’s reach.<sup>49</sup> *Carter v. Carter Coal Co.* distinguished between production and commerce, holding that there was no direct relation between the two, even though the goods produced would later move across state lines.<sup>50</sup>

Expansion of the Commerce Clause power returned in 1937, with the decision in *NLRB v. Jones & Laughlin Steel Corp.*<sup>51</sup> The Court held that Congress could regulate labor relations, when a labor stoppage of intrastate manufacturing operations would have a substantial effect on interstate commerce.<sup>52</sup> The Court abandoned prior distinctions between “direct” and “indirect” effects on interstate commerce;<sup>53</sup> and rejected precedent which would not allow regulation in areas commonly left to state control, such as production and manufacturing.<sup>54</sup>

*United States v. Darby* also upheld the Fair Labor Standards Act, which set minimum wage and maximum hours for employees engaged in the production of goods for interstate commerce.<sup>55</sup> The Court held that, while manufacturing was not itself interstate commerce, the shipment of manufactured goods was such commerce; and the prohibition of its shipment was a regulation of commerce. The Court stated that “[t]he power to regulate commerce is the power ‘to prescribe the rule by which commerce is to be governed.’”<sup>56</sup>

The peak of Commerce Clause power was in 1942 with the decision in *Wickard v. Filburn*.<sup>57</sup> The holding in *Wickard* allowed Congress to regulate the amount of wheat an individual farmer could

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<sup>48</sup> *A.L.A. Schechter Poultry Corp. v. United States*, 295 U.S. 495 (1935).

<sup>49</sup> *Id.* at 544-47.

<sup>50</sup> *Carter v. Carter Coal Co.*, 298 U.S. 238, 303 (1936).

<sup>51</sup> *NLRB v. Jones & Laughlin Steel Corp.*, 301 U.S. 1 (1937).

<sup>52</sup> *Id.*

<sup>53</sup> *A.L.A. Schechter Poultry*, 294 U.S. at 544-47.

<sup>54</sup> *Carter*, 298 U.S. at 304; *United States v. E.C. Knight Co.*, 156 U.S. 1, 12 (1895).

<sup>55</sup> *United States v. Darby*, 312 U.S. 100 (1941).

<sup>56</sup> *Id.* at 113 (citations omitted).

<sup>57</sup> *Wickard v. Filburn*, 317 U.S. 111 (1942).

raise under the Agricultural Adjustment Act of 1938, by looking at the “cumulative effects” of home produced wheat on the sales of wheat in commerce.<sup>58</sup> The Court held “that [an individual’s] own contribution to the demand for wheat may be trivial by itself where, as here, his contribution, taken together with that of many others similarly situated, is far from trivial.”<sup>59</sup> *Wickard* marked the Court’s adoption of the cumulative effects doctrine.

Social issues were again regulated pursuant to the Commerce Clause in 1964. In *Heart of Atlanta Motel v. U.S.*, the congressional statute which guaranteed equal access to public places survived a Commerce Clause challenge.<sup>60</sup> The Court held that only a “rational basis” was required for Congress to find that discrimination placed a burden upon interstate commerce.<sup>61</sup> In *Katzbach v. McClung*, the Civil Rights Act of 1964 was similarly held not to violate the Constitution by imposing the legislation on a restaurant whose interstate activities were limited to the purchase of out-of-state beef.<sup>62</sup> The decreased spending arising from a refusal to serve blacks was found to have a close-enough connection to interstate commerce.<sup>63</sup>

Congressional power under the Commerce Clause was very broad throughout much of this century. The “effects doctrine,” the “bar doctrine,” the “cumulative effects doctrine,” and the “rational basis doctrine” allowed Congress to regulate activities very expansively. As subsection B, *infra*, explains, *Lopez* demonstrably limited this expansive power.

### **B. United States v. Lopez**

For the first time in over sixty years, the Supreme Court declined to further extend Congress’s Commerce Clause power in *United States v. Lopez*.<sup>64</sup> Alfonso Lopez, Jr. was a twelfth grade student who was convicted of possessing a firearm in a school zone in violation of the Gun-Free School Zones

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<sup>58</sup> *Id.* at 128-29.

<sup>59</sup> *Id.* at 127-28.

<sup>60</sup> *Heart of Atlanta Motel, Inc. v. United States*, 379 U.S. 241, 261 (1964).

<sup>61</sup> *Id.* at 252-53, 258.

<sup>62</sup> *Katzbach v. McClung*, 379 U.S. 294, 295 (1964).

<sup>63</sup> *Id.* at 304.

<sup>64</sup> *Lopez*, 514 U.S. at 549.

Act of 1990 (“Gun-Free Act”).<sup>65</sup> Under the Gun-Free Act, Congress made it a federal offense for “any individual knowingly to possess a firearm at a place that the individual knows, or has reasonable cause to believe, is a school zone.”<sup>66</sup> The Court held in a five-to-four decision that the possession of a firearm in a school zone did not substantially affect interstate commerce and exceeded the authority of Congress “[t]o regulate Commerce ... among the several States . . . .”<sup>67</sup> Thus, the Court departed from the rational basis standard traditionally employed in Commerce Clause cases.<sup>68</sup>

### **1. Majority And Concurring Opinions**

Chief Justice Rehnquist delivered the majority opinion for the Court and Justices O’Connor, Scalia, Kennedy and Thomas joined. Justices Kennedy and Thomas filed concurring opinions. According to the majority, the Gun-Free Act neither regulated a commercial activity nor contained a requirement that the possession be connected in any way to interstate commerce.<sup>69</sup> Following the lead in *Maryland v. Wirtz*, which reaffirmed that “the power to regulate commerce, though broad indeed, has limits,”<sup>70</sup> the Court identified “three broad categories of activity that Congress may regulate under its commerce power.”<sup>71</sup> First, Congress can regulate the use of the channels of interstate commerce.<sup>72</sup> Second, Congress can regulate and protect the instrumentalities of interstate commerce, or persons or things in interstate commerce, even though the threat may come from intrastate activities.<sup>73</sup> Third, Congress can regulate those activities having a substantial effect on interstate commerce.<sup>74</sup>

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<sup>65</sup> *Id.*

<sup>66</sup> *Id.* at 551 (citing 18 U.S.C. § 922(q)(1)(A)).

<sup>67</sup> *Id.* at 551.

<sup>68</sup> *Id.* at 557 (citations omitted).

<sup>69</sup> *Id.* at 551.

<sup>70</sup> *Id.* at 557 (quoting *Maryland v. Wirtz*, 392 U.S. 183, 196-97 (1968), holding that the de minimis character of individual instances arising under a statute is of no consequence, only when the general regulatory statute bears a substantial relation to commerce).

<sup>71</sup> *Id.* at 558 (citations omitted).

<sup>72</sup> *Id.* (citations omitted). “‘[T]he authority of Congress to keep the channels of interstate commerce free from immoral and injurious uses has been frequently sustained, and is no longer open to question.’” *Id.* (citation omitted).

<sup>73</sup> *Id.* (citations omitted).

<sup>74</sup> *Id.* at 558-59 (citations omitted).

The Court determined that only the third category applied in *Lopez*'s case and defined three areas of inquiry to determine whether the regulated activity "substantially affects" interstate commerce: 1) whether the statute controls a commercial activity, or an activity necessary to the regulation of some commercial activity; 2) whether the statute contains a jurisdictional nexus requirement, which would ensure that the activity in question affects interstate commerce; and 3) whether the rationale to uphold the statute has a logical stopping point.<sup>75</sup>

The *Lopez* majority held that the Gun-Free Act failed each of these three "substantial effects" tests. First, the Court found that Section 922(q) was a criminal statute that had no relation to "'commerce' or any sort of economic enterprise" and was not an essential part of a larger regulation of economic activity.<sup>76</sup> Thus, the activity sought to be regulated—possession of a gun in a local school zone—was not sufficiently connected to a commercial transaction, and hence, could not substantially affect interstate commerce. The Court even distinguished the holding in *Wickard* as being sufficiently connected to an economic activity, since the consumption of home-grown wheat competed with wheat in commerce.<sup>77</sup>

Second, the Gun-Free Act failed because it lacked a jurisdictional element through which a case-by-case inquiry could establish the requisite nexus between the firearm possession in question and interstate commerce.<sup>78</sup> Congress could not regulate mere possession of firearms, without finding a connection to interstate commerce. The government's failure to establish a substantial connection was echoed in the legislative history. The Court noted that, "the Government concede[d] that '[n]either the statute nor its legislative history contain[ed] express congressional findings regarding the effects upon interstate commerce of gun possession in a school zone.'"<sup>79</sup>

The government had argued that gun possession in school zones could result in violent crimes which would affect interstate commerce by increasing the "costs of crime," and thereby raise insurance

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<sup>75</sup> *Id.* at 559-65.

<sup>76</sup> *Id.* at 561.

<sup>77</sup> *Id.* at 560-61 ("Even *Wickard*, which is perhaps the most far reaching example of Commerce Clause authority over intrastate activity, involved economic activity in a way that the possession of a gun in a school zone does not.").

<sup>78</sup> *Id.* at 561.

<sup>79</sup> *Id.* at 562 (citation omitted).

rates. Violent crime could also affect people's decisions to travel, based upon their perception of the amount of crime in a given area. Finally, the presence of guns in schools might threaten the educational process by tainting the learning environment. In turn, this could reduce the productivity of citizens, which would have an adverse affect on the economic well-being of the nation.<sup>80</sup> The Court rejected these "costs of crime" and "national productivity" reasonings as having no logical stopping point:

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. . . [I]t is difficult to perceive any limitation on federal power, even in areas such as criminal law enforcement or education where States historically have been sovereign. Thus if we were to accept the Government's arguments, we are hard pressed to posit any activity by an individual that Congress is without power to regulate.<sup>81</sup>

Because mere possession of a gun in a school zone did not by itself have a substantial effect on interstate commerce, the Gun-Free Act exceeded Congress's Commerce Clause authority. Additionally, the Court sought to reaffirm the distinction of "what is truly national and what is truly local," which implied that the Commerce Clause should also be limited by concepts of federalism and state sovereignty.<sup>82</sup>

The concurring opinion of Justice Kennedy, in which Justice O'Connor joined, placed more emphasis on these federalism concerns. When the activity sought to be regulated is non-commercial in nature, Kennedy would evaluate whether the regulation enters an area traditionally regulated by the states. Justice Kennedy was concerned that if the federal government regulated entire areas of traditional state concern, having nothing to do with the regulation of commercial activities, "the boundaries between the spheres of federal and state authority would blur and political responsibility would become illusory."<sup>83</sup> Since the Gun Free Act was not regulating a commercial activity and entered an area traditionally of state concern, education and crime, Justices Kennedy and O'Connor joined in the Court's holding.<sup>84</sup>

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<sup>80</sup> *Id.* at 563-64.

<sup>81</sup> *Id.* at 564.

<sup>82</sup> *Id.* at 567.

<sup>83</sup> *Id.* at 577 (citations omitted).

<sup>84</sup> *Id.* at 568.

Justice Thomas would limit Congress's Commerce Clause power even further. In his concurrence, he warned that the "substantial effects" test is still too broad. Justice Thomas was "aware of no cases prior to the New Deal that characterized the power flowing from the Commerce Clause as sweepingly as does our substantial effects test."<sup>85</sup> He advocated a return to the "original understanding of the Commerce Clause."<sup>86</sup>

## **2. The Dissent**

Justices Stevens, Souter and Breyer filed dissenting opinions, and Justices Stevens, Souter and Ginsburg joined in Justice Breyer's opinion. Justice Stevens disagreed with the majority's conclusion that gun possession was not a commercial activity. He reasoned that guns were both articles of commerce and articles that could be used to restrain commerce, and that their possession was the consequence of commercial activity.<sup>87</sup> Justice Souter felt the majority took "a backward glance" to the jurisprudence of the past sixty years.<sup>88</sup> He objected to the distinction between commercial and noncommercial activities as creating the same problems which led the Court to reject the distinction between direct and indirect effects.<sup>89</sup>

Justice Breyer based his dissent on three principles. First, that the power to regulate commerce included the power to regulate local activities so long as they significantly affected interstate commerce.<sup>90</sup> Second, that a court should consider not just the effect of a single act, but also its cumulative effects.<sup>91</sup> Third, that the Constitution mandates that courts defer to congressional findings, both because the Constitution delegates the commerce power to Congress and because the

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<sup>85</sup> *Id.* at 596.

<sup>86</sup> *Id.* at 601.

<sup>87</sup> *Id.* at 602-03.

<sup>88</sup> *Id.* at 608.

<sup>89</sup> "The distinction between what is patently commercial and what is not looks much like the old distinction between what directly affects commerce and what touches it only indirectly." *Id.* "[T]oday's decision may be seen as only a misstep, its reasoning and its suggestions not quite in gear with the prevailing standard, but hardly an epochal case." *Id.* at 614-15.

<sup>90</sup> *Id.* at 615.

<sup>91</sup> *Id.* at 616.

determination requires “empirical judgment” more properly left to the legislature.<sup>92</sup> Justice Breyer determined that Congress could have rationally found, based upon reports and hearings, that “violent crime in school zones,” through its effect on the “quality of education,” significantly affects “interstate commerce.”<sup>93</sup>

Justice Breyer cited three legal problems that the majority opinion created. First, the holding was contrary to modern Supreme Court cases that upheld congressional actions, despite indirect connections to interstate commerce, that were less significant than the effect of school violence.<sup>94</sup> Second, the majority’s holding was irreconcilable from its holdings with earlier cases by making the critical distinction between “commercial” and non-commercial “transactions[s].”<sup>95</sup> Despite the distinction, Justice Breyer felt that education would fall on the commercial side of the line.<sup>96</sup> The final legal problem he identified was that the holding created legal uncertainty in an area of law that seemed reasonably well-settled.<sup>97</sup>

### **3. The Modern Understanding**

Several basic rules may be drawn from the *Lopez* decision. First, Congress can regulate three categories of activity: (1) the use of the channels of commerce; (2) the instrumentalities of commerce; and (3) activities that substantially affect commerce.<sup>98</sup> Additionally, *Lopez* reaffirmed *Wickard* concerning Congress’s ability to regulate a purely intrastate activity if it is part of a class of activities that, taken as a whole, has a substantial “cumulative effect” on interstate commerce.<sup>99</sup> However, there are

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<sup>92</sup> *Id.* at 616-17.

<sup>93</sup> *Id.* at 618-19.

<sup>94</sup> *Id.* at 625.

<sup>95</sup> *Id.* at 627 (citations omitted). “[T]his approach fails to heed this Court’s earlier warning not to turn ‘questions of the power of Congress’s upon ‘formula[s]’ that would give ‘controlling force to nomenclature such as ‘production’ and ‘indirect’ and foreclose consideration of the actual effects of the activity in question upon interstate commerce.’” *Id.* at 627-28 (citing *Wickard v. Filburn*, 317 U.S. 111, 120 (1942)). *See also* *United States v. Darby*, 312 U.S. 100, 116-17 (1941).

<sup>96</sup> *Lopez*, 514 U.S. at 629.

<sup>97</sup> *Id.* at 630.

<sup>98</sup> *Id.* at 558-59.

<sup>99</sup> *Id.* at 560-61; *Wickard*, 317 U.S. at 124.

suggestions in *Lopez* that Congress will be granted less deference when regulating activities that are not commercial<sup>100</sup> or areas of traditional state concern.<sup>101</sup> Nevertheless, “[t]he court must defer to a congressional finding that a regulated activity affects interstate commerce, if there is any rational basis for such a finding.”<sup>102</sup>

The value of *Lopez* as precedent to future Commerce Clause challenges is clearly uncertain.<sup>103</sup> *Lopez* was a five-to-four decision, generating six different legal opinions. The *Lopez* majority did not reverse the past sixty years of Commerce Clause jurisprudence. In fact, Justice Thomas warned that consideration of stare decisis prevented such a result.<sup>104</sup> Justices Kennedy and O’Connor believe the Commerce Clause could regulate noncommercial activities having a nexus to interstate commerce, so long as the regulation does not impinge upon state sovereignty.<sup>105</sup> Thus, the majority’s return to a commercial/noncommercial distinction may not withstand the tests of time. Perhaps the Court was simply not willing or ready to further extend the Commerce Clause into the areas of crime and education, areas that traditionally have been regulated by the states.<sup>106</sup> When the Court was ready to regulate racial relations, it had no problem extending the Commerce Clause to attain that end.<sup>107</sup>

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<sup>100</sup> *Lopez*, 514 U.S. at 560.

<sup>101</sup> *Id.* at 552-53.

<sup>102</sup> *Hodel v. Virginia Surface Mining & Reclamation Ass’n*, 452 U.S. 264, 276 (1981); *see also* *Gibbs v. Babbitt*, 31 F. Supp. 2d 531, 534 (E.D.N.C. 1998) (“Even after *Lopez* placed limits on the Commerce Clause as a grant of Congressional authority, a reviewing court need only determine ‘whether a rational basis existed for concluding that a regulated activity’ substantially affects interstate commerce.” (citing *Lopez*, 514 U.S. at 557)).

<sup>103</sup> *Nagle*, *supra* note 14, at 176 (“Whether *Lopez* marks a dramatic shift in Commerce Clause jurisprudence or is instead destined to be a ‘but see’ citation remains to be seen.”).

<sup>104</sup> *Lopez*, 514 U.S. at 601 n.8 (“Although I might be willing to return to the original understanding, I recognize that many believe that it is too late in the day to undertake a fundamental reexamination of the past 60 years. Consideration of stare decisis and reliance interests may convince us that we cannot wipe the slate clean.”).

<sup>105</sup> *Id.* at 568-83.

<sup>106</sup> *Id.* at 564; *see also* *Brzonkala v. Virginia Polytechnic Inst. and State Univ.*, 169 F.3d 820, 828-29 (4th Cir. 1999), *cert. granted sub nom.* *Brzonkala v. Morrison*, 144 L. Ed. 2d 842 (1999), *and cert. dismissed sub nom.* *United States v. Morrison*, No. 99-5, 99-29 (R46-018), 2000 U.S. LEXIS 2518, at \*1 (Apr. 5, 2000); *United States v. Kirk*, 70 F.3d 791, 795-97 (5th Cir. 1995), *cert. denied*, 118 S. Ct. 47 (1997).



#### IV. COMMERCE CLAUSE JURISPRUDENCE IN ENVIRONMENTAL LEGISLATION

##### A. Before *Lopez*

Over the past twenty-five years, Congress has enacted numerous laws pursuant to the Commerce Clause to protect the environment and natural resources. For example, Congress can regulate pollution under the Surface Mining Control and Reclamation Act,<sup>108</sup> manage and dispose of hazardous wastes under the Resource Conservation and Recovery Act (“RCRA”),<sup>109</sup> and the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”),<sup>110</sup> protect water quality under the CWA,<sup>111</sup> protect air quality under the Clean Air Act (“CAA”),<sup>112</sup> and protect endangered species under the ESA.<sup>113</sup>

Prior to *Lopez*, the Court granted the traditional broad deference to Congress’s Commerce Clause authority when interpreting environmental legislation. In *Hodel v. Virginia Surface Mining & Reclamation Ass’n.*, Congress prohibited surface coal miners from mining private land except with a permit in accordance with the standards of the Surface Mining Control and Reclamation Act.<sup>114</sup> The

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<sup>107</sup> See *supra* notes 60-63 and accompanying text.

<sup>108</sup> 30 U.S.C. §§ 1201-1328 (1994).

<sup>109</sup> 42 U.S.C. §§ 6901-6992k (1994).

<sup>110</sup> 42 U.S.C. §§ 9601-9675 (1994). Under CERCLA, whenever a spill or release of a hazardous substance occurs on private land, the owners of the land, as well as former owners, transporters, and disposers of the hazardous waste, can be held liable for the entire cost of clean up. *Id.*

<sup>111</sup> See *supra* note 7.

<sup>112</sup> 42 U.S.C. §§ 7401-7671q (1994).

<sup>113</sup> See *supra* note 2.

<sup>114</sup> *Hodel*, 452 U.S. at 264.

Court held that the Act did not violate the Commerce Clause as regulating the use of private lands. The Court reasoned that it must defer to congressional findings that a regulated activity affects interstate commerce, if there was a rational basis for the finding.<sup>115</sup> The congressional findings were that (1) surface coal mining had a substantial effect on interstate commerce; (2) coal was an article of commerce; and (3) Congress could have rationally concluded that the reclamation standards and permit requirements were necessary to protect interstate commerce in coal.<sup>116</sup> Thus, the commerce power was found “broad enough to permit congressional regulation of activities causing air or water pollution, or other environmental hazards that may have effects in more than one State.”<sup>117</sup>

The Endangered Species Act was also construed broadly. In *United States v. Billie*, the Endangered Species Act survived a First Amendment freedom of religion challenge and was upheld as applying to the hunting of the Florida panther by Indians on Seminole reservations.<sup>118</sup> The court held that Indian reservation hunting rights were not absolute when a species, such as the Florida panther, was in danger of extinction.<sup>119</sup> In *Delbay Pharmaceuticals, Inc. v. U.S. Department of Commerce*, the court recognized the judicial deference paid to congressional power under the Commerce Clause, even in light of the due process limitations of the Fifth Amendment.<sup>120</sup> In *Delbay*, a permit issued for the importation of a substance derived from endangered species, pursuant to the economic hardship exception to the Endangered Species Conservation Act of 1969, did not give plaintiffs the right to sell the substance in interstate commerce in violation of the Endangered Species Act of 1973.<sup>121</sup> The court reasoned that if there was a continued market for the substance, it may encourage the illegal taking of the endangered species to supply the market.<sup>122</sup> Thus, the court held that Congress had the power

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<sup>115</sup> *Id.* at 276. ““Even activity that is purely intrastate in character may be regulated by Congress, where the activity, combined with like conduct by others similarly situated, affects commerce among the States, or with foreign nations.”” *Id.* at 277 (citing *Fry v. United States*, 421 U.S. 542, 547 (1975)).

<sup>116</sup> *Id.*

<sup>117</sup> *Id.* at 282.

<sup>118</sup> *United States v. Billie*, 667 F. Supp. 1485, 1492 (S.D. Fla. 1987).

<sup>119</sup> *Id.*

<sup>120</sup> *Delbay Pharm., Inc. v. U.S. Dep’t of Commerce*, 409 F. Supp. 637, 645 (D.D.C. 1976).

<sup>121</sup> *Id.* at 642 (“The 1973 Act prohibits not only the importation of endangered species, but also makes it unlawful to ‘sell or offer for sale in interstate or foreign commerce’ an endangered species.”). *Id.* at 640 (citing 16 U.S.C. § 1538(a)(1)(F)).

<sup>122</sup> *Id.* at 642.

under the Commerce Clause to exclude from the channels of interstate commerce those products whose movements between the states Congress deemed harmful to the national welfare.<sup>123</sup>

### **B. Post-Lopez Challenges**

Ironically, most environmental laws appear to be surviving Commerce Clause attacks in light of *Lopez*-based challenges upon findings that the particular activity in question substantially affects interstate commerce.<sup>124</sup> The primary reason is that most of the central provisions of major federal environmental laws regulate industrial or commercial activity, rather than non-commercial individual activity.

So far, species protection has fared well since *Lopez*. In 1996, in *United States v. Bramble*, an individual was convicted of possessing eagle feathers and challenged Congress's authority under the Bald Eagle Protection Act.<sup>125</sup> The court upheld the Act<sup>126</sup> against a Commerce Clause challenge, reasoning that "[e]xtinction of the eagle would substantially affect interstate commerce by foreclosing any possibility of several types of commercial activity: future commerce in eagles or their parts; further interstate travel for the purpose of observing or studying eagles; or further commerce in beneficial products derived either from eagles or from analysis of their genetic material."<sup>127</sup> The court held that laws governing intrastate activities would be upheld if they regulated a class of activities which substantially affects interstate commerce.<sup>128</sup> The court also held that it was reasonable for Congress to conclude that the possibility of commercial gain presents a special threat to the preservation of the eagles because that prospect creates a powerful incentive both to evade the statute, and to take a large quantity of birds.<sup>129</sup>

In 1997, *Building Industry Association of Superior California v. Babbitt* held that the listing of fairy shrimp as endangered under the ESA did not exceed the federal Commerce Clause power or

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<sup>123</sup> *Id.* at 645.

<sup>124</sup> *See infra* notes 125-142 and accompanying text.

<sup>125</sup> *United States v. Bramble*, 103 F.3d 1475 (9th Cir. 1996).

<sup>126</sup> 16 U.S.C. §§ 668-668d (1994).

<sup>127</sup> *Bramble*, 103 F.3d at 1481.

<sup>128</sup> *Id.*

violate the Tenth Amendment.<sup>130</sup> Plaintiffs argued that there was no nexus between the fairy shrimp and interstate commerce and that the listing interfered with state and local sovereignty over land use, and did not “substantially affect” interstate commerce as required by *Lopez*.<sup>131</sup> The court distinguished the ESA from the statute in *Lopez* as directly and expressly regulating “the import, export and sale of listed species in interstate commerce.”<sup>132</sup> The court looked at congressional legislative history and determined that species preservation substantially affects the national economic interest.<sup>133</sup> Furthermore, the court found plaintiffs’ position untenable since “[a]ccording to plaintiffs, if a species is abundant and scattered plentifully across state lines, Congress is fully empowered under the Commerce Clause to protect it. But when that same species becomes more scarce and its population reduced to a single state, Congress’s hands are suddenly tied.”<sup>134</sup>

In 1998, in *Gibbs v. Babbitt*, plaintiffs sought a declaration that all federal regulations relating to the taking of red wolves on private land were invalid as exceeding the Tenth Amendment.<sup>135</sup> The court held that the wolves were clearly articles in interstate commerce and had a substantial effect on interstate commerce due to their tourism value.<sup>136</sup> It was irrelevant that the threat to the wolf-related commerce came from the intrastate takings of wolves.<sup>137</sup>

However, challenges to some environmental regulations have been successful. In *United States v. Olin Corp.*,<sup>138</sup> the court invalidated an application of CERCLA requiring the clean-up of a twenty-acre solid waste management site because the pollution at that site did not affect interstate commerce.<sup>139</sup> In applying *Lopez* to CERCLA, the court held that *Lopez* requires that the statute regulate economic activity which substantially affects commerce and contain a jurisdictional element which ensures that the

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<sup>129</sup> *Id.* at 1480.

<sup>130</sup> *Building Indus. Ass’n of Superior Cal. v. Babbitt*, 979 F. Supp. 893 (D.D.C. 1997).

<sup>131</sup> *Id.* at 906.

<sup>132</sup> *Id.* at 907.

<sup>133</sup> *Id.*

<sup>134</sup> *Id.* at 908.

<sup>135</sup> *Gibbs v. Babbitt*, 31 F. Supp. 2d 531 (E.D.N.C. 1998).

<sup>136</sup> *Id.* at 535.

<sup>137</sup> *Id.*

<sup>138</sup> *United States v. Olin Corp.*, 927 F. Supp. 1502 (S.D. Ala. 1996).

<sup>139</sup> *Id.* at 1533; 42 U.S.C. §§ 9606(a), 9607(a) (1994).

statute affects commerce.<sup>140</sup> The court found that since the plant being regulated was no longer operational, it did not qualify as economic.<sup>141</sup> The court further held that, despite the fact that CERCLA did not contain a jurisdictional element, the activity in question had no effect on interstate commerce since there was no evidence that the contaminants at the site traveled across state lines.<sup>142</sup> However, the CWA has been attacked as an abuse of congressional Commerce Clause power when applied to isolated wetlands.

### **C. Attack on Isolated Wetlands**

The purpose of the CWA is to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”<sup>143</sup> Section 404 of the CWA requires a permit for the “discharge of dredged or fill material into navigable waters.”<sup>144</sup> This section has been attacked as an abuse of congressional Commerce Clause power when applied to isolated wetlands. Isolated wetlands, unlike adjacent wetlands, have no hydrological connection to any body of water.<sup>145</sup> Isolated wetland regulation has primarily been upheld based on the wetland’s use or potential use as a habitat for migratory birds.<sup>146</sup> In *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, the court reaffirmed the CWA’s ability to regulate isolated intrastate wetlands that provide a habitat for migratory birds. The rationale was that the cumulative degradation of intrastate

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<sup>140</sup> *Olin Corp.*, 927 F. Supp. at 1532.

<sup>141</sup> *Id.* at 1533.

<sup>142</sup> *Id.*

<sup>143</sup> 33 U.S.C. § 1251(a) (1994).

<sup>144</sup> 33 U.S.C. § 1344(a) (1994).

<sup>145</sup> *Hoffman Homes, Inc. v. EPA*, 961 F.2d 1310, 1314 (7th Cir. 1992) (“By their very definition, isolated wetlands have no relationship or interdependence with any other body of water.”), *vacated*, 975 F.2d 1554 (7th Cir. 1992), *and amended by* 999 F.2d 256 (7th Cir. 1993). The Court has recognized the importance of regulating waters that together form an “integral part of the aquatic environment.” *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 135 (1985).

<sup>146</sup> *See infra* notes 147-148 and accompanying text.

waters could have a substantial effect on interstate commercial interests relating to those birds.<sup>147</sup>

Further, in *United States v. Hallmark Construction Company*, the court held that the regulation of intrastate isolated wetlands based on their actual or potential use by migratory birds did not exceed Congress's power under the Commerce Clause.<sup>148</sup>

However, section 404 of the CWA was invalidated as applied to isolated wetlands that did not provide a habitat for migratory birds in *United States v. Wilson*.<sup>149</sup> In *Wilson*, the developers were convicted of knowingly discharging fill material and excavated dirt into wetlands without a permit, in violation of the CWA.<sup>150</sup> The defendants appealed and challenged the authority of the Army Corps of Engineers' regulation, which defined waters of the United States to include those waters whose degradation "could affect" interstate commerce.<sup>151</sup>

The Court of Appeals for the Fourth Circuit agreed and held that the regulation required neither that the regulated activity have a substantial effect on interstate commerce, nor that the covered waters have any sort of nexus with navigable or interstate waters.<sup>152</sup> The court noted that, "[w]ere this

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<sup>147</sup> *Solid Waste Agency of N. Cook County v. U.S. Army Corps of Eng'rs*, 998 F. Supp. 946, 949-52 (N.D. Ill. 1998) [hereinafter *Cook County*]; see also *Hoffman Homes, Inc. v. EPA*, 999 F.2d 256, 260-61 (7th Cir. 1993) (holding that the potential use of wetlands by migratory birds was sufficient to support jurisdiction because "millions of people annually spend more than a billion dollars on hunting, trapping, and observing migratory birds" and the "cumulative loss of wetlands has reduced populations of many bird species").

<sup>148</sup> *United States v. Hallmark Constr. Co.*, 14 F. Supp. 2d 1069, 1075 (7th Cir. 1998).

<sup>149</sup> *United States v. Wilson*, 133 F.3d 251 (4th Cir. 1997).

<sup>150</sup> *Wilson*, 133 F.3d at 253.

<sup>151</sup> *Id.* at 255; see 33 C.F.R. § 328.3(a) (1993). The CWA defines navigable waters as "the waters of the United States." 33 U.S.C. § 1362(7). By regulation, the Army Corps of Engineers ("Corps") further defines this to include "[a]ll other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of 'which could' affect interstate or foreign commerce." 33 C.F.R. § 328.3(a) (1993). In a preamble to this regulation, the Corps explains that the term "other waters" includes those which "are or would be used as habitat by other migratory birds which cross state lines." 51 Fed. Reg. 41,217 (Nov.13, 1986). This is commonly known as the "migratory bird rule."

<sup>152</sup> *Wilson*, 133 F.3d at 255

regulation a statute, duly enacted by Congress, it would present serious constitutional difficulties, because . . . it would appear to exceed congressional authority under the Commerce Clause.”<sup>153</sup>

Thus, under *Wilson*, if a wetland is truly isolated, meaning that it is neither connected to navigable waters nor connected to interstate commerce (such as providing a habitat for migratory birds), Congress cannot regulate it. Similar to isolated wetlands, isolated species are seemingly not connected to interstate commerce. Because the ESA speaks of the importance of every species, including isolated ones, the decision in *Wilson* may lend support for opponents who would like to weaken application of the ESA’s “take by habitat modification provision” to isolated species having no connections to interstate commerce.<sup>154</sup>

## **V. FEDERAL JURISDICTION OVER ISOLATED SPECIES UNDER THE “TAKE BY HABITAT” MODIFICATION PROVISION**

### **VI.**

#### **A. Before *Lopez***

Judicial decisions interpreting federal jurisdiction over isolated species under the Commerce Clause before *Lopez* are scarce. The most notable case is *Palila v. Hawaii Department of Land and Natural Resources*, where the regulation of an isolated species was upheld.<sup>155</sup> *Palila* was the first case to deal with the “take by habitat modification” provision of the ESA.<sup>156</sup>

In *Palila*, the state of Hawaii was sued for failing to protect the Palila bird population by refusing to eradicate the feral sheep population that was threatening the critical habitat of the Palila.<sup>157</sup> The state challenged application of the ESA to the Palila habitat since the bird neither moved interstate

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<sup>153</sup> *Id.*

<sup>154</sup> See *infra* note 232 and accompanying text.

<sup>155</sup> *Palila v. Hawaii Dep’t of Land and Natural Resources*, 471 F. Supp. 985 (D. Haw. 1979).

<sup>156</sup> *Id.* at 992.

<sup>157</sup> *Id.* at 987.

nor inhabited federal lands.<sup>158</sup> However, the court held that the Commerce Clause and the Treaty Power gave Congress the ability to preempt state control over an endangered species, even when the species was indigenous to that state.<sup>159</sup>

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Congress has determined that protection of any endangered species anywhere is of the utmost importance to mankind, and that the major cause of extinction is destruction of natural habitat. In this context, a national program to protect and improve the natural habitats of endangered species preserves the possibilities of interstate commerce in these species and of interstate movement of persons, such as amateur students of nature or professional scientists who come to a state to observe and study these species, that would otherwise be lost by state inaction.<sup>160</sup>

After *Lopez*'s enunciation of the "substantial effects" test, one may question the validity of the holding in *Palila*. To preserve a species, based upon "the possibilities of interstate commerce" in that species, by interfering with local land use appears to run afoul of *Lopez*. Nevertheless, shortly after *Lopez*, the Supreme Court denied a petition for certiorari in *National Association of Home Builders v. Babbitt*, which seemed to address the concern raised in *Wilson*, but as applied to isolated species.<sup>161</sup>

### **B. After Lopez: Home Builders v. Babbitt**

*Home Builders* is a significant victory not only for a rare species of a fly, but also for the protection of isolated endangered species in general. However, the effect of this decision still remains to be seen. The three judges on the D.C. Circuit deciding the case offered three different explanations for why the ESA could or could not protect the fly's habitat.

The Delhi Sands Flower-Loving Fly ("Fly"), was listed as an endangered species in 1993.<sup>162</sup> This rare species, belonging to the "mydas flies" family, visits flowers in search of nectar, and pollinates

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<sup>158</sup> *Id.* at 992.

<sup>159</sup> *Id.* at 995.

<sup>160</sup> *Id.* at 944-95 (citing *Tennessee Valley Auth. v. Hill*, 437 U.S. 153 (1978)).

<sup>161</sup> *National Ass'n of Home Builders v. Babbitt*, 130 F.3d 1041 (D.C. Cir. 1997), *cert. denied*, 524 U.S. 937 (1998) [hereinafter *Home Builders*].

<sup>162</sup> *Id.* at 1044.



nearby native plants.<sup>163</sup> The Fly is truly isolated. There are currently only eleven known populations of the Fly, all within an eight-mile radius, in the soils of San Bernardino and Riverside Counties, California.<sup>164</sup>

This dispute arose when San Bernardino County decided to build a hospital and was forced to alter its plans because the chosen site was determined by the FWS to contain the Fly's habitat.<sup>165</sup> The County filed suit when the FWS informed the County that their plan of redesigning a nearby intersection to improve emergency vehicle access to the hospital would likely constitute a "taking" of the Fly, under the ESA section 9(a)(1)(B)'s "take by habitat modification" provision.<sup>166</sup>

The appellants<sup>167</sup> challenged application of section 9(a)(1), which makes it unlawful for any person to "take any [endangered or threatened] species within the United States or the territorial sea of the United States,"<sup>168</sup> to the Delhi Sands Flower-Loving Fly.<sup>169</sup> They argued that the federal government does not have the authority to regulate the use of nonfederal lands in order to protect the Fly, which is found only within a single state.<sup>170</sup> The district court disagreed and held that the application of section 9(a)(1) to the Fly was a valid exercise of Congress's Commerce Clause power. The rationale of the D.C. Circuit, which affirmed by a vote of 2 to 1, is summarized below.<sup>171</sup>

### **1. The Majority Opinion**

Judge Wald, writing the majority opinion, held that section 9(a)(1) of the ESA was clearly not a regulation of the instrumentalities of interstate commerce or of persons or things in interstate commerce.<sup>172</sup> Instead, she upheld the ESA as within Congress's authority to regulate the use of the

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<sup>163</sup> *Id.* at 1043-44.

<sup>164</sup> *Id.*

<sup>165</sup> *Id.* at 1043.

<sup>166</sup> *Id.*

<sup>167</sup> National Association of Home Builders of the United States, the Building Industry Legal Defense Fund, the County of San Bernardino, and the City of Colton, California. *Id.*

<sup>168</sup> 16 U.S.C. § 1538(a)(1).

<sup>169</sup> *Home Builders*, 130 F.3d at 1045.

<sup>170</sup> *Id.*

<sup>171</sup> *Id.* at 1043.

<sup>172</sup> *Id.* at 1046.

“channels of interstate commerce” and as an activity which “substantially affect[s] interstate commerce.” Judge Wald relied upon the first and third categories of activity discussed in *Lopez*.<sup>173</sup>

Judge Wald held that the ESA as applied was a proper exercise of Congress’s power over the channels of interstate commerce for two reasons. First, section 9(a)(1) is necessary to control the transport of endangered species into interstate commerce.<sup>174</sup> Judge Wald analogized that the prohibition against takings of endangered species was similar to the prohibition against the transfer and possession of machine guns.<sup>175</sup> The prohibition on “taking” endangered species intrastate was necessary to control interstate trafficking of the endangered species. However, no evidence was present of trafficking in the Fly.

Second, Judge Wald held that the prohibition against taking endangered species is permitted to keep the channels of interstate commerce free from immoral and injurious uses.<sup>176</sup> This rationale has been used before, such as in *Heart of Atlanta Hotel*, where the Supreme Court upheld the prohibition on racial discrimination in places of public accommodation, which served interstate travelers, against a Commerce Clause challenge.<sup>177</sup> Congress has the authority to regulate local activities if those activities might have a substantial and harmful effect upon commerce.<sup>178</sup>

The court also held that section 9(a)(1) falls under the category of activities that substantially affects interstate commerce.<sup>179</sup> The court reasoned that Congress could rationally conclude that section 9(a)(1) substantially affects interstate commerce by preventing the destruction of biodiversity.

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<sup>173</sup> *Id.*

<sup>174</sup> *Id.*

<sup>175</sup> *Id.* at 1047. “By regulating the market in machineguns, including regulating intrastate machinegun possession, Congress has effectively regulated the interstate trafficking in machineguns.” *Id.* (quoting *United States v. Lopez*, 514 U.S. 549, 559 (1995)).

<sup>176</sup> *Id.* at 1048. Congress used its authority “to prevent the eradication of an endangered species by a hospital that is presumably being constructed using materials and people from outside the state and which will attract employees, patients, and students from both inside and outside the state. Thus, like regulations preventing racial discrimination or labor exploitation, regulations preventing the taking of endangered species prohibit interstate actors from using the channels of interstate commerce to “promote or spread[] evil, whether of a physical, moral or economic nature.” *Id.* (citations omitted).

<sup>177</sup> *See supra* notes 60-61.

<sup>178</sup> *See supra* notes 41-45 and accompanying text.

<sup>179</sup> *Home Builders*, 130 F.3d at 1049.

Biodiversity is a term biologists use to describe the number, variability and variety of life on Earth.<sup>180</sup> Each time an extinction occurs, the pool of wild species diminishes.<sup>181</sup> The court reviewed the legislative history of the ESA, which reflects the value of preserving genetic diversity and the potential for future commerce related to or derived from that diversity.<sup>182</sup> The court rationalized that a decrease in biodiversity would have a substantial effect on interstate commerce because natural resources that could otherwise be used for commercial resources would be diminished.<sup>183</sup>

Further, section 9(a)(1) controls the adverse effects of interstate competition that would result from states lowering endangered species protection standards in order to attract development.<sup>184</sup> In *Darby*, the Court upheld federal wage and hour laws because “such regulations were necessary to prevent states with higher regulatory standards from being disadvantaged by states with lower regulatory standards.”<sup>185</sup> This argument has merit, despite the concurring and dissenting opinions to the contrary. If states were allowed to impose lower environmental regulations, they would unfairly compete with states that imposed more stringent environmental regulations by attracting and retaining corporate investment.<sup>186</sup>

## **2. Judge Henderson’s Concurrence**

Judge Henderson voted to uphold application of the Act on the ground that the potential loss of biodiversity itself would have a substantial effect on the ecosystems and as a result, interstate commerce.<sup>187</sup> She rationalized that everything in the environment is interconnected and that the loss of one species, even an intrastate one, would substantially affect interstate commerce. She disagreed with

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<sup>180</sup> ROGER L. DiSILVESTRO, RECLAIMING THE LAST WILD PLACES, A NEW AGENDA FOR BIODIVERSITY 23-25 (1993).

<sup>181</sup> *Home Builders*, 130 F.3d at 1052-54.

<sup>182</sup> *Id.* at 1050-51.

<sup>183</sup> *Id.*

<sup>184</sup> *Id.* at 1054-56.

<sup>185</sup> *United States v. Darby*, 312 U.S. 100, 114 (1941).

<sup>186</sup> This has been termed the “race-to-the-bottom” argument. See Richard B. Stewart, *Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy*, 86 YALE L.J. 1196, 1212 (1977).

<sup>187</sup> *Home Builders*, 130 F.3d. at 1058.

Judge Wald's theory that an endangered species has a substantial effect on interstate commerce by virtue of its potential medical or economic value; she wrote that any possible value was too uncertain.<sup>188</sup> She also disagreed with Judge Wald that this was a regulation of the use of interstate commerce channels because the Fly did not move between states either on its own or through human agency.<sup>189</sup>

### **3. Judge Sentelle's Dissent**

Judge Sentelle did not agree that Congress can regulate the Fly, which is neither commerce nor interstate. He reasoned that section 9(a)(1), analogous to the statute in *Lopez*, does not regulate commerce.<sup>190</sup> He disagreed, as did Judge Henderson, that section 9(a)(1) was a regulation of the channels of interstate commerce. Judge Sentelle did not agree that a statute which prevents the destruction of local flies, which are neither articles of commerce nor travelling interstate, is keeping the channels of commerce free from their interstate transportation.<sup>191</sup>

Whether or not the activity substantially affected commerce was the only category under *Lopez* that Judge Sentelle arguably felt could have permitted Congress to regulate the Fly. However, by applying the subsidiary inquiries of the test enunciated in *Lopez*, he felt that section 9 did not substantially affect commerce.<sup>192</sup> First, the regulation did not control a commercial activity or an activity necessary to the regulation of some commercial activity. Second, section 9 did not require that the regulated activity affect interstate commerce or provide for a jurisdictional nexus. Third, Judge Sentelle felt that section 9

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<sup>188</sup> *Id.*

<sup>189</sup> *Id.* at 1057-58. "In support [Judge Wald] cites decisions upholding regulation of commercially marketable goods, such as machine guns and lumber, and public accommodations. In each case, the object of regulation was necessarily connected to movement of persons or things interstate and could therefore be characterized as regulation of the channels of commerce." *Id.* (citations omitted).

<sup>190</sup> *Id.* at 1062.

<sup>191</sup> *Id.* at 1063 ("[P]reventing habitat destruction contributes nothing to the goal of eliminating the fly, or any other endangered species, from the channels of commerce.").

<sup>192</sup> *Id.* at 1063-64.

had no logical stopping point.<sup>193</sup> Further, he criticized Judge Henderson's reliance on *Wickard v. Filburn*. He stated that *Maryland v. Wirtz* rejected the expansive reading of *Wickard* and held that "neither here nor in *Wickard* has the court declared that Congress may use a relatively trivial impact on commerce as an excuse for broad general regulation of state or private activities."<sup>194</sup>

From the unfortunately confusing result in *Home Builders* we are left to determine whether future challenges of the ESA's application to isolated species may be defeated through *Lopez*'s limitation to the Commerce Clause.

## **VII. ISOLATED ENDANGERED SPECIES SHOULD BE PROTECTED UNDER THE ENDANGERED SPECIES ACT**

### **A. Challenges To Isolated Endangered Species**

Opponents to the ESA will argue that when section 9 applies to a purely isolated species, that species should not be subject to federal control. Their argument, along the lines of Sentelle's dissent, will be that isolated species, like isolated wetlands, have no connections to interstate commerce and thus do not have a substantial effect on interstate commerce.

Clearly, Congress has the authority to regulate the takings of wildlife when they are articles of commerce.<sup>195</sup> However, just because a species is isolated and does not move across state lines, does not lessen the argument. An irrational distinction would exist if the federal government could regulate the spotted owl because it is located in Washington, Oregon and California, but not the Palila bird because it is indigenous to Hawaii. The fact that a species has been listed as endangered or threatened actually increases the likelihood that the species is found in only one state. Species capable of considerable

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<sup>193</sup> *Id.* at 1064 ("As I understand her argument, because of some undetermined and indeed indeterminable possibility that the fly might produce something at some undefined and undetermined future time which might have some undefined and undeterminable medical value, which in turn might affect interstate commerce at that imagined future point, Congress can today regulate anything which in turn might advance the pace at which the endangered species becomes extinct.").

<sup>194</sup> *Id.* at 1066 (citing *Wirtz*, 392 U.S. at 196 n.27). *But see supra* note 70 and accompanying text.

geographic movement are often not threatened or endangered. The FWS, for example, requires evidence of geographical isolation and/or genetic differentiation when determining whether a species should be listed on the basis that it is a distinct population segment.<sup>196</sup> Furthermore, almost one-half of all threatened and endangered species are found in only one state.<sup>197</sup>

Isolated species may have just as great an impact on interstate commerce as nonisolated species. The isolated Malayan pit viper might seem of little importance to developers or commerce. Yet studies on the venom of one species of these vipers led to the discovery of the angiotensin system that regulates blood pressure in human beings. Once that system was known it became possible to devise a molecule that alters blood pressure. This compound, which is the preferred prescription drug for hypertension, brings the Squibb Company \$1.3 billion annually in sales.<sup>198</sup> Madagascar, the most isolated of the great islands of the world,<sup>199</sup> is home to the rosy periwinkle, a pink five-petaled flower, which produces two alkaloids, vinblastine and vincristine, that cure most victims of two of the deadliest of cancers, Hodgkin's disease and acute lymphocytic leukemia.<sup>200</sup> The income from manufacturing and selling "these two substances exceeds \$180 million per year."<sup>201</sup>

Aside from requiring that isolated species have a substantial effect on interstate commerce, *Lopez* has opened the door to challenging environmental legislation under two additional theories: (1) that the activity is an area of traditional state concern;<sup>202</sup> and (2) that the regulated activity is not "economic,"<sup>203</sup> and, hence, does not have a substantial effect on interstate commerce.

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<sup>195</sup> See *supra* notes 120-122, 125 & 127-129.

<sup>196</sup> *Southwest Ctr. for Biological Diversity v. Babbitt*, 926 F. Supp. 920, 924-25 (D. Ariz. 1996).

<sup>197</sup> *Home Builders*, 130 F.3d at 1052-54.

<sup>198</sup> Thomas E. Lovejoy, *Biodiversity: What Is It?*, in *BIODIVERSITY II: UNDERSTANDING AND PROTECTING OUR BIOLOGICAL RESOURCES* 7, 9 (Marjorie L. Reaka-Kudla et al. eds., 1997).

<sup>199</sup> EDWARD O. WILSON, *THE DIVERSITY OF LIFE* 267 (1992).

<sup>200</sup> *Id.* At 283.

<sup>201</sup> *Id.*

<sup>202</sup> *Lopez*, 514 U.S. at 555-57.

<sup>203</sup> *Id.* at 560.

## **1. Areas of Traditional State Concern**

The regulation of wildlife has historically been at the federal level. Thus, courts will most likely not hold that the federal government is entering an area of traditional state concern in its regulation of wildlife. More importantly, the Supreme Court has held that the federal government has the authority to regulate wildlife.<sup>204</sup> However, the “take by habitat modification” provision of section 9 is more troubling.

Opponents believe this provision, as applied to isolated species, is unconstitutional because of its impact on local land use, which traditionally is an area of state concern.<sup>205</sup> Without this provision, however, the ESA would be a hollow attempt at species protection. A species habitat is vital to its viability; and habitat destruction is by far the biggest problem facing endangered species today.<sup>206</sup> In *Lopez*, the Court determined that the Gun-Free Act was not an essential part of a larger regulation of economic activity. Section 9, on the other hand, is an essential provision which furthers the main goals of the ESA, which is to protect threatened and endangered species. Thus, any effect on local land use is incidental to the main goals of the ESA. Furthermore, the fact that the regulation of a species’ habitat affects local land is not a prima facie case for a constitutional challenge under the Commerce Clause. *Wickard* held that incidental local effects did not matter so long as the matter being regulated has an effect on interstate commerce.<sup>207</sup> While section 9 does not aim to regulate local land use, it may displace local land use regulation, with significant costs to private landowners—costs that may far exceed any potential benefit from saving a particular listed species.

However, the Act’s prohibition on the taking of species is not absolute, since incidental takings by agencies or private landowners may be allowed as long as mitigation measures are taken. Thus, private landowners may be permitted to pursue some economic activity on their land, even though such

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<sup>204</sup> See *Douglas v. Seacoast Prods.*, 431 U.S. 265, 284 (1977) (criticizing the notion that states owned uncaptured wildlife within their borders as a “19th-century legal fiction” (citing *Geer v. Connecticut*, 161 U.S. 519, 539-40 (1896) (Field, J., dissenting))).

<sup>205</sup> See *supra* note 28 and accompanying text.

<sup>206</sup> See *DiSilvestro supra* note 180, at 31 (“Without proper habitat—whether it be virgin forest, open grassland, the bottom of the sea, or the human intestine—no species can survive.”).

<sup>207</sup> *Wickard*, 317 U.S. at 119-20.

activity may incidentally take a listed species.<sup>208</sup> Many incidental take permits are being granted and development is moving forward.<sup>209</sup> For example, in San Bruno, California, in exchange for the permit to develop certain areas and destroy 14% of the habitat of an endangered butterfly, a substantial area of privately owned habitat was to be conveyed to the County of San Mateo.<sup>210</sup> Similar permits have been granted in many circumstances across the nation.<sup>211</sup>

The statute in *Lopez* also entered an area traditionally left up to the states—education and criminal law. For the Court, the argument articulated in support of the Gun Free Act in *Lopez*, that a poor learning environment would have a substantial effect on commerce, too broadly extended the Commerce Clause. If left unchecked, Congress could regulate school curriculum or family relations—as those have as much of a link to commerce as the statute in *Lopez*.<sup>212</sup> In contrast, the ESA’s habitat modification provision’s effects on a landowner’s rights is the furthest it can go. Not all species will affect land use, only those species which have been listed as endangered or threatened. As pointed out by biologists, this number is very small in comparison to the number of species actually inhabiting Earth.<sup>213</sup> Additionally, as discussed *supra*, a landowner can take an endangered species (and effectively destroy their habitat) so long as he or she first obtains an incidental take permit.

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<sup>208</sup> See Richard E. Webster, *Habitat Conservation Plans Under the Endangered Species Act*, 24 SAN DIEGO L. REV. 243 (1987). For a thorough discussion of the conflicts between landowners and the ESA see Michael J. Bean, *The Endangered Species Act and Private Land: Four Lessons Learned from the Past Quarter Century*, 28 ENVTL. L. REP. (ENVTL. L. INST.) 10,701 (Nov. 1998).

<sup>209</sup> As of May 2000, there were 305 incidental take permits issued and listed on the U.S. Fish & Wildlife Service web site. U.S. Fish & Wildlife Serv., *Habitat Conservation Plans* (visited May 10, 2000) <[http://ecos.fw.gov/hcp\\_report/hcp\\_summary.html?region=9&module=421](http://ecos.fw.gov/hcp_report/hcp_summary.html?region=9&module=421)>; see also *Land and Money Mitigation Requirements in Endangered Species Act Enforcement: Hearings Before the House Comm. on Resources*, 106th Cong. 5 (1999) (statement of Jamie Clark, Dir. U.S. Fish and Wildlife Serv.); see *supra* notes 194-203 and accompanying text.

<sup>210</sup> See Webster, *supra* note 208, at 250.

<sup>211</sup> See U.S. Fish & Wildlife Serv., *supra* note 209 (listing habitat conservation plans and the corresponding incidental take permits).

<sup>212</sup> *Lopez*, 514 U.S. at 564.

<sup>213</sup> See Lovejoy, *supra* note 198, at 7 (noting that the number of species currently described is 1.4 million, while current estimates of the total number of species run from 10 to 100 million).



## **2. Economic Activities**

Section 9 regulates many activities that also can be challenged as not being economic in nature. However, even the *Lopez* majority conceded that any activity could be looked at as commercial.<sup>214</sup> Thus, the economic/noneconomic distinction presents obvious difficulties in application. Nevertheless, species protection has already been tied to activities which are economic.<sup>215</sup> Whether a species has economic value in drawing tourism,<sup>216</sup> in the commercial sale of the species or its parts,<sup>217</sup> or in travel associated with scientific study, Congress has a variety of commercial concerns giving it the constitutional authority to regulate even isolated species.

When confronted with a species that does not have actual, but only potential, links to commerce, as in the Delhi Sands Flower-Loving Fly case, the effect on interstate commerce becomes less apparent. However, habitat modification that occurs incident to commercial development, as seen in *Home Builders*, is economic. Problems arise when the private landowner wants to make improvements to his land and is confronted with a Section 9 violation because the construction will likely destroy the habitat of an endangered species. This scenario is significantly different from the construction of the hospital in *Home Builders*, which is arguably a commercial activity.

A residential landowner building a pool or tennis court on his land, for example, can hardly be characterized as engaging in commerce. However, as law professor and scholar John Copeland Nagle points out, it depends on which question you are asking.<sup>218</sup> For example, if the test is whether or not the pool will have a substantial effect on commerce, the answer will most likely be no. Similarly, if one asks whether an isolated species will have a substantial effect on commerce, the answer will also most likely be no. However, if one asks the question whether isolated endangered species as a class will have a substantial effect on commerce, the answer is obviously yes. Thus, the reason for the confusion is that everyone is asking different questions. If the focus remains on the regulated class of entities—endangered species—which have already been tied to economic activities, courts may then eliminate the

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<sup>214</sup> *Lopez*, 514 U.S. at 565-66.

<sup>215</sup> See *supra* note 179.

<sup>216</sup> See *supra* notes 135-137.

<sup>217</sup> See *supra* notes 125, 127-129.

<sup>218</sup> See Nagel, *supra* note 14, at 180-92.

tenuous problem of tying a private individual landowner's actions to interstate commerce. Thus, the constitutional analysis should stay focused on the species, not the landowners filing suit.

### **B. Isolated Species Link to Interstate Commerce Is Found in Biodiversity**

Conflicts between humans and other species are inescapable—the homes, buildings, churches, schools, museums, stadiums, and roads we all use are built on land which species inhabit.<sup>219</sup> However, if the protection of endangered species is seen as the protection of biodiversity, then restrictions which seem only trivial may finally be understood. Because of the importance of biological and ecosystem diversity to the well-being of the nation and also interstate commerce, it is appropriate to regulate endangered species under the Commerce Clause—even isolated ones.<sup>220</sup>

The term biodiversity encompasses diversity at all levels of organization. Biologists often refer to biodiversity as the “number, variability, and variety of life on Earth.”<sup>221</sup> Biodiversity is important at three distinct levels: species diversity; ecosystem or habitat diversity, and finally genetic diversity.<sup>222</sup> Paradoxically, the term “biodiversity” symbolizes biologists’ lack of knowledge about the natural world.<sup>223</sup> No one really knows for sure how many species there are, or how many are lost on Earth.

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<sup>219</sup> See DAVID S. WILCOVE, *THE CONDOR’S SHADOW, THE LOSS AND RECOVERY OF WILDLIFE IN AMERICA* 5 (1999) (“There can be little doubt that humans have essentially reconfigured the American landscape. Today, more than 85 percent of the virgin forests of the United States have been logged, 90 percent of the tallgrass prairies have been plowed or paved, and 98 percent of the rivers and streams have been dammed, diverted, or developed. In the process, hundreds of species have vanished completely, many others have declined to the point of endangerment, and still others are drastically reduced in number.”). See also R. EDWARD GRUMBINE, *GHOST BEARS, EXPLORING THE BIODIVERSITY CRISIS* 9 (1992) (discussing how humans can move away from an adversarial relationship with nature by understanding biological diversity and learning to live within ecological limits); NILES ELDREDGE, *LIFE IN THE BALANCE: HUMANITY AND THE BIODIVERSITY CRISIS* 140 (1998) (“By transforming grasslands and forests into farmlands, cities, suburbs, and shopping mall complexes, we humans are not simply displacing ecosystems elsewhere, but rather actively destroying them, shrinking the habitat necessary to support a vast range of species.”).

<sup>220</sup> See *supra* notes 29-30 and accompanying text.

<sup>221</sup> DAVID TAKACS, *THE IDEA OF BIODIVERSITY, PHILOSOPHIES OF PARADISE* 48 (1996) (quoting Jane Lubchenco).

<sup>222</sup> *Id.* at 46 (quoting Peter Brussard).

<sup>223</sup> *Id.* at 83.

While the number of species currently described is 1.4 million, current estimates of the total number of species run from 10 to 100 million. But ignorance about biodiversity may have severe consequences. Biologists warn of the latent value of undiscovered foods, medicines and industrial products.<sup>224</sup> It has been estimated that less than 5% of the species on earth have been tested for either food or pharmaceutical potential.<sup>225</sup> Biological resources still provide the raw materials for food, most pharmaceuticals, clothing and shelter. The loss of species and genetic diversity diminishes the pool of biological resources available for human consumption. Since extinctions are irreversible, the present losses of diversity will result in future generations inheriting a biologically impoverished world, with potentially significant social, health and economic consequences.<sup>226</sup> Although the National Biological Diversity Conservation and Environmental Research Act did not pass through Congress, the Act contained significant findings regarding biodiversity:

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. . .

(5) reduced biological diversity may have serious consequences for human welfare as resources for research and agricultural, medicinal, and industrial development are irretrievably lost;

(6) reduced biological diversity may also endanger the functioning of ecosystems and critical ecosystem processes that moderate climate, govern nutrient cycles and soil conservation and production, control pests and diseases, and degrade wastes and pollutants;

(7) reduced biological diversity will diminish the raw materials available for scientific and technical advancement, including the development of improved varieties of cultivated plants and domesticated animals;

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<sup>224</sup> *Id.* at 87. “It is just enormously stupid to throw away the parts. I mean, why destroy something that is irreplaceable and just throw it away when we don’t even understand what it’s all about? . . .” *Id.* at 89 (quoting Hugh Iltis). “It’s pretty stupid to be destroying things that we may be dependent upon and that we can’t recover.” *Id.* (quoting Jane Lubchenco); “[A] ‘gigantic gamble with the future of civilization’ to think that human survival does not depend on diversity of populations of nonhuman species.” *Id.* (quoting Gretchen Daily and Paul Ehrlich).

<sup>225</sup> *Id.*

<sup>226</sup> *Id.*

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Ensuring a wide genetic base is fundamental to maximizing the utility of biotechnology in agriculture and medicine.<sup>228</sup> For example, in agriculture, genetic resources are critical for improving crops. Improved breeds of crops derived from a diverse gene pool of wild plants have accounted for about half of the increase in productivity in U.S. agriculture. Annually these improved crops account for about \$1 billion to U.S. agriculture.<sup>229</sup> In medicine, plant and animal species remain an important source of pharmaceutical ingredients. Plant extracts are used in about 25% of the prescription drugs used in the United States, with a market value totaling \$15 billion annually.<sup>230</sup> Discoveries for the advancement of medicine may constitute one of the most powerful ways biodiversity can contribute to human society. For example, *Penicillium* mold at one time was valued for what it did to flavor blue cheeses, but this later paled in comparison when it led to the discovery of antibiotics.<sup>231</sup> These are only a few examples, but they clearly show that an isolated species' contribution to biodiversity can have a "substantial effect" on interstate commerce.

The legislative proceedings during 1973 for the Endangered Species Act are similarly filled with expressions of concern over the risk that might lie in the loss of any endangered species.<sup>232</sup> Congress was very concerned about the unknown uses that endangered species might have and about the unforeseeable place such creatures may have in the chain of life on the planet.<sup>233</sup> In explaining the need for legislation, the House Committee on Merchant Marine and Fisheries stated:

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As we homogenize the habitats in which these plants and animals evolved, and as we increase the pressure for products that they are in a position to supply. . . we threaten their—and our own—genetic heritage. The value of this genetic heritage is, quite literally, incalculable.

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<sup>227</sup> National Biological Diversity Conservation and Environmental Research Act, H.R. REP. NO. 102-259, pt. 1, at 1 (1991).

<sup>228</sup> *Id.*

<sup>229</sup> *Id.*

<sup>230</sup> *Id.*

<sup>231</sup> See Lovejoy, *supra* note 198, at 9.

<sup>232</sup> *Tennessee Valley Auth. v. Hill*, 437 U.S. 153, 174-77 (1979).

<sup>233</sup> *Id.* at 178-79.

...

From the most narrow possible point of view, it is in the best interests of mankind to minimize the losses of genetic variations. The reason is simple: they are potential resources. They are keys to puzzles which we cannot solve, and may provide answers to questions which we have not yet learned to ask.

...

Who knows, or can say, what potential cures for cancer . . . may lie locked up in the structures of plants which may yet be undiscovered, much less analyzed? . . . Sheer self-interest impels us to be cautious.<sup>234</sup>

These comments reflect congressional concern for biodiversity, and ultimately the possible benefits that biodiversity may bring to humanity.

### **C. Cumulative Effects Doctrine**

Even under the strictest application of *Lopez*, provided one applies *Wickard's* cumulative or aggregate effects doctrine in evaluating section 9 challenges, the economic or substantial effect of any one species is immaterial. By applying this doctrine to environmental legislation, most statutes will likely survive a constitutional challenge. Extension of Commerce Clause authority over local activity, where that activity has minimal or no impact on commerce, is constitutional if, in the aggregate, the class of activity substantially affects interstate commerce.<sup>235</sup> Section 9 takings, through habitat modification by a private landowner, should be regulated as a class of activities, the regulation of which is necessary to effectuate the purpose of the ESA—the preservation of endangered species.

In enacting the ESA, Congress sought to protect all endangered and threatened species because “species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and

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<sup>234</sup> *Id.* at 178 (citation omitted). *But see* J.B. Ruhl, *Biodiversity Conservation and the Ever-Expanding Web of Federal Law Regulating Nonfederal Lands: Time for Something Completely Different?*, 66 U. COLO. L. REV. 555 (1995) (arguing that as presently structured, the ESA does not get where biodiversity conservation policy says we should be headed).

<sup>235</sup> *Wickard v. Filburn*, 317 U.S. 111, 125 (1942).

scientific value to the Nation and its people.”<sup>236</sup> All of these utilitarian values have an effect on commerce—billions of dollars are spent annually on food, tourism, medicine, advances in science, and so on. Thus, when viewed in the aggregate, the cumulative effects of habitat destruction will likely have a substantial effect on interstate commerce.

Most environmental statutes are upheld based upon their “cumulative effects.” In the decision of, *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, a federal court reaffirmed the congressional authority to regulate isolated intrastate wetlands providing a habitat for migratory birds.<sup>237</sup> The court held that the cumulative degradation of intrastate waters could have a substantial effect on interstate commercial interests relating to those birds.<sup>238</sup> Under this rationale, it does not matter whether or not the actual birds themselves substantially affected commerce. In fact, the destruction of one isolated wetland is not likely to have a substantial effect on commerce; the court looked to the cumulative effect of intrastate wetland destruction.

Similarly, it may be difficult to prove the effect on interstate commerce of one isolated species with no apparent ties to economic activity. In fact, if the whooping crane disappeared tomorrow, society probably would not feel its effects. But if species protection was conducted on a case-by-case basis, most species would not have a substantial effect on commerce. However, the cumulative effect of these decisions *would* have a substantial effect on commerce. Thus, if species protection under the ESA has any meaning at all, it must be viewed in the aggregate.

When looked at from this perspective, it does not matter if scientists ever traveled to see the Delhi Sands Flower-Loving Fly; or if the Fly traveled between the states; or if the Fly is exhibited in a museum in another state. These arguments only point to the tenuousness of the links that the Fly has to commerce. If one looks to the fundamental purpose of the ESA, it is to protect endangered species. Since all species are necessary for the preservation of biodiversity, a loss of such diversity will substantially affect interstate commerce.

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<sup>236</sup> 16 U.S.C. § 1531(a)(3) (1994).

<sup>237</sup> Cook County, 998 F. Supp. 946 (1998).

<sup>238</sup> *Id.* at 949-52.

Finally, courts should not make value judgments between which species should and should not be saved.<sup>239</sup> Biologists and naturalists would be loath to put into the hands of the courts the ultimate decision of a particular specie's effect on agriculture, science, society, and ultimately commerce. Courts simply are not equipped to make these types of determinations. Judge Sentelle would make such a determination for the Fly. But it is not the Fly's demise but the total loss of biodiversity that substantially affects commerce. Only under this logic can all species be protected—even isolated ones.

## VII. CONCLUSION

Whether *Lopez* presents a real threat to environmental regulation can only be tested with time. Nevertheless, even under the broadest reading of *Lopez*, most of the central provisions of major federal environmental laws will be upheld based upon principles of stare decisis. Further, because environmental laws generally regulate commercial activities that are not “areas of traditional state concern” they will have a greater chance of meeting constitutional muster. Undoubtedly, as provisions of the Act encroach more and more on private land development rights, the Act's constitutionality will continue to be challenged.

Congress may regulate isolated species under the Commerce Clause. The new test for constitutionality enunciated in *Lopez* is whether the regulated activity has a substantial impact on interstate commerce. Additionally, *Lopez* reaffirmed the holding in *Wickard*, concerning Congress's ability to regulate a purely intrastate activity if it is part of a class of activities that, taken as a whole, has a substantial “cumulative effect” on interstate commerce.<sup>240</sup> The protection of isolated species should be upheld under the Commerce Clause by applying this rationale. The loss of one species may not be substantial, but the cumulative effects of the loss of all species, which decreases biodiversity, will have a substantial effect on interstate commerce.

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<sup>239</sup> See generally John C. Nagle, *Playing Noah*, 82 MINN. L. REV. 1171 (1998) (arguing that the “Noah Principle” is a reaffirmation of the Endangered Species Act's goal to save all species).

<sup>240</sup> *Lopez*, 514 U.S. at 560-61; *Wickard*, 317 U.S. at 124.

When we chip away at the biodiversity of our planet, we chip away at our potential for knowing more about, and surviving better in the world. Forgetting about the aesthetic reasons for preservation, there are pragmatic reasons as well. Even people who have little regard for the spiritual and emotional benefits of biodiversity protection cannot ignore the fundamental benefits that wild species bring to our daily lives, such as food, medicine and even jobs. While one species may seem to have no intrinsic worth whatsoever, its value in terms of biodiversity may well be incalculable.